NavMed 369

UNITED STATES NAVY

MEDICAL NEWS LETTER

Editor - Captain L. B. Marshall, MC, USN (RET)

Vol. 24 Friday, 26 November 1954 No. 10

TABLE OF CONTENTS

PREVENTIVE MEDICINE SECTION

* * * * * *

Policy

The U. S. Navy Medical News Letter is basically an official Medical Department publication inviting the attention of officers of the Medical Department of the Regular Navy and Naval Reserve to timely up-to-date items of official and professional interest relative to medicine, dentistry, and allied sciences. The amount of information used is only that necessary to inform adequately officers of the Medical Department of the existence and source of such information. The items used are neither intended to be nor susceptible to use by any officer as a substitute for any item or article in its original form. All readers of the News Letter are urged to obtain the original of those items of particular interest to the individual.

* * * * * *

Notice

Due to the critical shortage of medical officers, the Chief, Bureau of Medicine and Surgery, has recommended, and the Chief of Naval Personnel has concurred, that Reserve medical officers now on active duty who desire to submit requests for extension of their active duty for a period of three months or more will be given favorable consideration.

* * * * * *

Residency Training Policy for Reserve Medical Officers on Active Duty

The response by Reserve medical officers to the Residency Training Program for Reserve officers, as provided in BuMed Instruction 1520.7, has been most gratifying. There are several vacancies remaining in the following residency programs: Pathology, Orthopedic Surgery, Obstetrics and Gynecology, Pediatrics, and Urology. A very limited number of billets are still available in Otolaryngology, Anesthesiology, and Ophthalmology. While applications for training in the above specialties should be for one year at a time, it is expected that in most instances officers who participate in this program will be permitted to complete their required training without interruption. Every effort will be made to accomplish this insofar as service needs will permit.

Reserve medical officers on active or inactive duty, who have completed their obligated active duty imposed by the Universal Military Training and Service Act, as amended, are eligible for participation in this program. Reserve officers on inactive duty must request return to active duty in order to be assigned to such training.

SPECIAL NOTICE

TO ALL ADDRESSEES (EXCEPT U. S. Navy and Naval Reserve personnel on ACTIVE DUTY and U. S. Navy Ships and Stations).

Existing regulations require that all Bureau and office mailing lists be checked and circularized at least once each year in order to eliminate erroneous and duplicate mailings.

It is, therefore, requested that EACH RECIPIENT of the U. S. Navy Medical News Letter (EXCEPT U. S. Navy and Naval Reserve personnel on ACTIVE DUTY, and U. S. Navy Ships and Stations) fill in and forward immediately the form appearing below if continuation on the distribution list is desired.

Failure to reply to the address given on the form by 15 December 1954 will automatically cause your name to be removed from the files. Only one (1) answer is necessary. Please state the branch of the Armed Forces (if any) and whether Regular, Reserve, or Retired. Also, please write legibly. If names and addresses cannot be deciphered, it is impossible to compare them with the addressograph plates.

Editor

(Detach here)

Chief, Bureau of Medicine and Surgery _____
Navy Department, Potomac Annex (date)
Washington 25, D. C.

I wish to continue to receive the U. S. Navy Medical News Letter.

Name
or
Activity _____ Ret _____
or (Print or type, last name first) (rank, service, corps)
Civilian Status _____

Address _____
(number) (street)

City _____ Zone _____ State _____

_____
(Signature)

(Please print clearly. Only one answer is necessary.)

Eligible and interested medical officers should make applications to the Bureau of Medicine and Surgery, via the chain of command. Letters of application should contain an agreement to volunteer for the period of residency training requested and to remain on active duty in the Navy for a period of one year, following completion of training, for each year of training received.

From time to time the list of medical specialties in which shortages exist will be published in the Medical News Letter.

* * * * * *

The following is quoted in part from an address by Admiral R. B. Carney USN, Chief of Naval Operations, before officers of the Navy Department, 11 October 1954:

"Personal Leadership"

". . . . . In the military service, leadership is inherently personal. It is impossible to be a thing or a machine in the military service. If it is to have any heart or any soul or any of the characteristics that are necessary in a military service, the leadership must be personal . . . At each level throughout the service that same personal touch must exist if we are to succeed and to be as smart, able, and successful in our task as we should be. Each one of you in turn should have this urge, the same instinct to make yourselves known to your superiors and never to lose this personal touch.

. . . . . In those pleasant days before Pearl Harbor, we had a relatively small Navy. Virtually all the officers were the product of a single system which sought them young and thoroughly indoctrinated them in the lore, ideals, and the ethics of our service.

Our officers--and my own career is no exception--spent the best percentage of their lives at sea with the responsibilities of command on them while they were at sea. The fleets were compact and the shore establishment was small. The size of that shore establishment was a defect in our preparations for war, but it simplified our leadership problems. Schedules were regular and we knew months in advance where we would be at any given time. And then there was the stimulating fact of competitive effort both in our battle training and in sports. Navy life in those days had its hardships but there were fewer uncertainties, greater regularity, and, if you like, more fun.

Then came the post-war period during which the Navy was under attack from many sources. Also, right after V-J Day, the vastly expanded Navy of World War II was necessarily composed of a great variety of forces and specialties and our prewar cohesion was torn apart by the conflicting interests of several different groups within the naval service.

Fortunately, through honest effort and a firm adherence to sound principles, we weathered those bad days; and today I believe that we, as

a service, have the confidence of the country and the Congress. Nevertheless, we are operating under circumstances which, in considerable measure, militate against the esprit which is essential to a first-grade military organization . . . . .

A most significant factor in our individual appraisals of the attractiveness of life in our service is to be found in the deployments which the Navy must maintain in the furtherance of national policy. We are all loyal servants of our country and we will do what is necessary to support the national interests. But the fact remains that these deployments have a profound effect on the operating schedules of all our ships and units and have an equally profound effect on the fortunes and affairs of every individual in uniform.

In order to maintain these deployments, rotation is essential but we do not have the resources to enable us to rotate on the optimum basis of one-third deployed and two-thirds at home. Consequently, it is tough on the ships and on the people.

Another important factor stems from the fact that we cannot maintain an establishment of Regular career officers in numbers or by rank distribution adequate to man all the forces that the United States has determined we shall keep in being. It is necessary to draw heavily on the Reserves. Many of the Reserve officers must be retained on an extended active-duty basis. This factor is of importance because many of these gentlemen, although fundamentally civilians and fundamentally anxious to return to their civilian pursuits, must be utilized in positions of command.

The point is this: although in command and in executive positions tantamount to command, many of them are not imbued with a desire to make service life a career. Any lack of enthusiasm for a service career on their parts would instinctively be felt by their subordinates and possibly with some adverse effect.

This is no criticism of our splendid Reserve officers, and is not so intended. I served with the Operating Forces throughout the entire war for a period of 5-1/2 years and I know that we could never have done the job that we did without the support and the contributions of a very, very effective, loyal, and active Reserve. What I say is a simple statement of fact--those Reserve officers would find it difficult to preach the fiery and inspiring doctrine of lifetime dedication to the service if they themselves do not, in fact, aspire to that sort of career themselves. I point this up because it presents a problem to each of you, Regular and Reserve.

I have made it my business to find out what people think in our service and I have sought information concerning senior officers, junior officers, midshipmen, and enlisted personnel. All too frequently, I hear disturbing reports that run along this line: some are disturbed about the future of the Navy. Many feel that the military profession is held in low regard in our country. Others see too little chance of any acceptable family life as long as they are in uniform. Still others feel that they could do far better, financially, in civilian life.

Now, without attempting to evaluate the correctness of those feelings the fact which must concern us is that they do exist in some measure throughout the service. It is a way of thinking. It is in the minds of many people. It is not to be criticized. It is understandable. I do not for one moment go along with the old saying to the effect that the Navy ain't what it used to be, and never was, but we can not disregard these manifestations of disturbed thought which certainly do exist in some measure in the Navy today. Any objective consideration of these matters must lead to the conclusion that we have problems on our hands in this respect but we need not conclude that the problems are completely unsolvable.

Looking at the Navy today, we see an organization not homogeneous and tightly knit as it was 20 years ago; but, rather, a structure made up of a great number of lesser structures bound together by a common overall objective plus certain rituals and symbols. We see a large number of special activities which are needed to equip, prepare, supply, and operate the forces. We see a measure of specializing resulting from these circumstances, and we see an increase in organizational complexity which results not only from the multiplicity of specialties, but also is due, in part, to the larger supervisory and administrative structure superimposed on the Operating Forces.

Objective consideration inevitably leads to the conclusion that if good men are to be retained in the specialized efforts, there must be good goals to attract and hold these good men. I assure you that is my conviction . . .

But I see something else, also. I see a tendency amidst this great increase of administrative effort, to lose sight of the fundamental purpose of the Navy, or any other military service, and that is: military operations against the enemy.

. . . . . This business of some losing sight of the fundamental purpose of the organization possibly is to be expected because there are a great many more backer-uppers than there are trigger-pullers, and that is inherent in a military organization which is to be more than a one-shot affair.

If we are to be capable of sustained operations, this enormous backup is necessary. Nevertheless, the ultimate objective of the Navy is to prepare its forces for combat, and by the same token, prepare officers to lead those forces in combat and prepare the troops--bluejackets--to do a resolute, disciplined, and successful job under the stress of combat.

All of this adds up to one need: an unceasing attention to command, to smartness, to discipline, and to professional competence. There can be no compromise in these objectives. If a military service is to maintain the standards necessary for success in war there can be no abridging of the authority necessary to achieve these objectives.

. . . . . There are some rather intangible things which come into it also--poise, alertness, gentlemanly behavior. These things cannot be

prescribed by order, but they, nevertheless, are the hallmark of a good military man. It is incumbent upon each and every one of you to observe these things meticulously in your own conduct and to insist upon them in your subordinates.

I hope you will not misunderstand me when I speak of "authority" and "discipline." I am not advocating the development of martinets nor the legalizing of persecution. I have served in a great many ships in which the need for discipline was understood by all hands from top to bottom, without pounding on the table--ships in which an order was obeyed with alacrity and without question because of a great mutual confidence that existed among the members of the ships company; confidence in the officers on the part of the crew, confidence in the crew on the part of the commanding officer and his officers.

I have seen ships where every tiniest detail was cared for with meticulous attention, where inspection and the supervision of drills admitted of nothing less than perfection, where competition between the divisions within the ship was razor keen, and those ships were inevitably proud and happy organizations in which serious breaches of discipline were almost unknown. There is nothing wrong with that kind of leadership that demands perfection, but you have to set the example yourself to obtain the perfection of performance from those under you.

Now today--and this I will admit-- it is not as easy to achieve this atmosphere as it used to be. The personnel turnover is greater. It is more difficult to keep the old competitions going. The experience level of the officers is, on the average, not quite as high as it used to be when the service was smaller. Finally, the Uniform Code of Military Justice has made the administration of discipline so cumbersome in some respects as to dilute authority and even encourage infractions.

. . . . . Corrective measures that are achievable by the Navy place a very personal, individual responsibility on every officer and every petty officer. In other words, the premium is on the exercise of leadership by the individual. No statute can generate in your subordinate the will and the spirit to overcome difficulties. No order or directive by the Secretary of the Navy or the Chief of Naval Operations can produce a top-to-bottom spirit that will accept the tough breaks cheerfully and maintain enthusiasm at a high pitch in the face of disappointment and discouraging trends. Those are the things that can only come about through inspiring leadership and precept at every level.

. . . . . Now let me summarize. First, Navy life today, I believe, is tougher than it used to be. Because it is tougher, leadership must be of a higher quality than ever before. Officers must be above criticism in their appearance, their deportment, in the matter of professional qualifications, and in their relationships with their subordinates. No officer who is sloppy in his demeanor or in his performance of duty or in his

appearance is measuring up to the standard. I feel that every officer must measure up to the requirements of the billet to which he is assigned. And here is an interesting thing: the Reserve officer must accept an extra load to fully qualify himself in shorter time and with less training than is vouchsafed the Regular officer. The Regular, on his part, must assume the heavy responsibility of perfection in performance and in dedication to his service.

Within the Regular component, continued emphasis must be given to the development of the well-rounded career officer--the type that will provide judgment and breadth of view based on wide and varied experience. It is only by this means that we could qualify people for the top commands, and I am talking about joint and combined commands.

It is no less important to provide adequate incentive to the people who are specializing. Exceptional contributions and outstanding service on all levels and in all branches of the Navy as in civilian life must be adequately rewarded if our best brains are to be kept on the cutting edge of progress.

Second, when we look about us in this era of technological transition, surely we must conclude that in spite of the hard struggle and long hours that are involved, something electric is in the air, and we as sailors are privileged to work in one of the most interesting, diversified, and promising professions of today.

Third, individual opportunity is there to be grasped by him who has the industriousness, the wit, and the tenacity of purpose to strive for it. The Navy is not a philanthropical organization for the security of the individual, but it does offer great advantages of security in some measure compensating for the benefits that civilian life might offer us. Fundamentally, however, the Navy is a highly competitive organization--and it should be. War is highly competitive. We are trying to train people to endure the hardships and the strains of war and we would be doing ourselves and our country a disservice to adopt measures which would soften the fiber of the men in uniform.

The Navy should be highly competitive, and as a matter of fact, marked success in any walk of life is insured only by stiff competition.

In conclusion, I would say to you that I believe the Navy enjoys a good position with the people of the United States today. It is a complex, swift-moving profession which constitutes a challenge to the best that any man has to offer. It offers fine goals for success. It requires the utmost in leadership. Its leadership from the top to the bottom must rest on the qualities of devotion to duty, integrity of character, knowledge of the job from A to Z, and a sensitive individual consciousness that counsels fairness, human understanding, and loyalty up and down.

These are the foundation stones of leadership; the adhesives that bind them together are the convictions of leadership. In the final analysis, the most dangerous fighting man is the one who has the most faith in himself

and in the principles for which he is willing to make any sacrifice. True leaders must not only know what they believe in, but they must be able, with the same sense of righteous conviction, to imbue others . . . . . "

* * * * * *

The Case for Hysterectomy

An analysis of 1075 private patients who had hysterectomies was made to determine why the operations were performed and what the results were. There were 4 deaths in this series, a mortality of 0.37%. Two were sudden, from pulmonary emboli, each occurring on the 14th postoperative day as the patients were ready for discharge from the hospital; the third was from acute pyonephrosis and myocardial infarction, occurring the 23rd day, after a normal convalescence at home from vaginal hysterectomy, with death on the 28th day. The fourth patient had had resection of the sigmoid, resection of the terminal ileum, and removal of the uterus, both tubes and ovaries, and most of the urinary bladder for carcinoma of the sigmoid invading the pelvic organs. Death occurred after 12 days from peritonitis which developed from a leak in the end-to-end sigmoid anastomosis. Total hysterectomy was performed in 979 cases (91.1%), subtotal hysterectomy in 96 cases (8.9%). In the last 500 abdominal hysterectomies, 99.4% were total hysterectomies. In many, the reasons for surgery were obvious, while in others there were varying factors requiring detailed history, personal knowledge of the patient, surgical judgment, and observation. An evaluation of the operation and delineation of the case that needs hysterectomy seem of great importance because of confusion and misunderstanding on the part of some of the medical profession and, unfortunately, much of the general public.

When the health of a woman, physically and emotionally, is compromised by an abnormal uterus to a serious degree (and the judgment of this degree of disability is squarely on the shoulders of the conscientious surgeon performing hysterectomy), excision has proved one of the most satisfactory procedures in all surgery. The emotional confusion in consideration of the sexual organs, femininity, and procreation has prevented some from seeing or realizing the great importance of extending hysterectomy to those in dire need of it. Hysterectomy should never be performed for minor complaints and minor findings, but only when there are major diseases or when those complaints and findings add up to a major disability.

This detailed analysis was made to show what indications for hysterectomy were used in this private practice. There will be disagreements. Some will go to extremes in order to avoid performing hysterectomy. On the contrary, this study indicates the desirability and advantages of definitive surgery when strictly indicated. These indications are more numerous

than those accepted 30 years ago in the ultraconservative school. They include only these features: positive symptoms and positive findings in a patient who understands what the procedure will do, and who has been partially or wholly incapacitated, a patient who has not been unduly urged, who has thought the matter over carefully, and who wants the operation. This latter viewpoint has been emphasized by Burch.

There are many pitfalls in this operation. The risks are very slight but should not be minimized to the patient. The despairing hope of an unhappy woman that hysterectomy might cure her nervousness must be constantly searched for and clarified. Rarely does hysterectomy cure nervousness unless it is caused by pain, fear of fatal hemorrhage, knowledge of a lesion suggestive of a malignancy, or occasionally, extreme fear of pregnancy.

The concern that performance of hysterectomy for metrorrhagia in late menstrual life will lead to too many operations does not change the author's strong belief that, if such bleeding does not respond to curettage, thyroid therapy, and psychosomatic advice, hysterectomy usually is preferable to radium or roentgen therapy. This attitude has been stressed by Willson and Daly.

A serious objection to the ultra-conservative attitude is the risk of overlooking a malignant process. Not only must all patients with erosions of the cervix have biopsy (except the very young) and all with irregular bleeding have curettage (except puberty bleeders), but great care must be exercised in differentiating pelvic tumors. A benign myoma must not be confused with an ovarian carcinoma. Unfortunately, at times only exploration can give the proper information. Reassurance was given by the author to a post menopausal woman that she had a simple, harmless myoma; 6 months later laparotomy showed carcinomatosis. There was no myoma, and the tumor was an ovarian carcinoma. Such an error may occur again, but this one left a deep and painful impression.

In this series of 1075 hysterectomies, there were 94 operations definitely planned with a preoperative diagnosis of malignant growth. This included malignant lesions of the endometrium, cervix, and ovary, and represented 8.7% of the total operations. In addition, there were 19 unsuspected malignant growths found by the pathologist in the microscopic studies of the tissue submitted. These included 8 sarcomas in myomas, 4 carcinomas in situ of the cervix, 2 invasive squamous cell carcinomas of the cervix, 1 invasive adenocarcinoma of the cervix, 1 adenocarcinoma of the endometrium, 1 adenocarcinoma in an endometrial polyp, and 2 early carcinomas of the ovary. This totally unsuspected occurrence of malignant processes in the excised tissue was 1.8%. One hundred and thirteen patients in the series had malignant growths (10.5%).

The number of patients who were nervous after their hysterectomies is stated clearly, but most of these women were nervous before the operation. Unfortunately, many hoped they would never be nervous again. It

was so easy for the patient to forget the preoperative explanations and have such high hopes for cure of family troubles that they concealed their preoperative mental status. In those same cases, the gynecologic complaints were relieved as a rule; these were the complaints the author expected to cure, but the patient tended to forget. The functional element in the patient, as a whole, is a factor in every branch of medicine and surgery; certainly it is prominent in pelvic surgery.

Some of the patients in the series discussed did not have good results; the author was convinced that it was a mistake to operate on 4 of these patients. One had symptoms that could not be explained by the adenomyoma in the recto-vaginal septum. Two had severe pain, and were believed to have tumors. Exploration showed no tumors; hysterectomies were performed because the patients were at the menopause. One was much improved, the other worse. The fourth had hysterectomy at 40 years for left-sided pain, with only the finding of a myoma 2 cm. in diameter in the posterior wall. Some pain persisted, but the patient was pleased with the result. In each instance, the author was misled by certain symptoms and apparent findings. In two or three patients, reexamination over a period might have made clear that the tumor was not as large as originally thought and could not be responsible for the symptoms. It is important to reexamine complicated and difficult cases, especially when the symptoms are not clearly explained. The gynecologist must be keenly alert. The good results in 95 to 99% of carefully chosen cases make hysterectomy an exceedingly gratifying operation to both the patient and the surgeon. (Arch. Surg., Oct., 1954; L. A. Gray, M. D., Louisville, Ky.)

* * * * * *

Adrenal-Dependent Mammary Cancers

This article discusses the characteristics of steroid-dependent mammary cancers and the indications for adrenalectomy; it is based on a series of 100 consecutive unselected cases of recurrent far-advanced cancer of the breast, which were operated upon by the authors during the three-year period, 1951 - 1953. The group was somewhat homogeneous because all had far-advanced cancer of the breast, all had undergone previous roentgen and hormonal therapy, and all had failed to respond to these treatments.

The authors found that the response of the patient to removal of the steroid depots depends exclusively on functional characteristics both of the cancer and of the host. The factors involved are multiple. It is self-evident that, to deduce function quantitatively from the morphologic appearance of a tumor, is impossible. Often, many months have elapsed between

the time when the primary tumor was excised and the onset of metastasis, and frequently there has been extensive treatment with hormones in the interval. Also, it was found that cytologic evaluation was not invariably accurate in predicting the response to adrenalectomy. At times the regression of adenocarcinoma after adrenalectomy was neither extensive nor prolonged; in a few cases patients with less differentiated tumors had an unexpected remission of magnitude. Despite the frailties of morphologic interpretation, consideration of the histologic type of tumor was helpful in the selection of clinical patients for adrenalectomy.

Pearson, et al., have described two other criteria of estrogen-dependent mammary cancers. First, an increased excretion of calcium in the urine following the administration of estrogenic substances to patients with osseous metastasis indicates an estrogen-dependent cancer. Secondly, patients who have gained a remission from oophorectomy commonly respond favorably to subsequent adrenalectomy. It is obvious that the second consideration is inoperative when the ovaries are not functioning.

The postoperative mortality was 5% in a series of 100 women with far-advanced mammary cancer treated by adrenalectomy with or without oophorectomy in addition. Remissions of varying duration occurred in 38 cases; profound regression of the cancer has persisted for more than 36 months. Regression has occurred in soft tissue, pleural, peritoneal, hepatic and osseous metastases. The best response occurred in patients, (1) between age 40 and age 65, (2) with a prolonged interval between radical mastectomy and onset of metastasis, (3) with a specific histologic type of tumor, and (4) with a high titer of estrogenic substances in the urine.

Adenocarcinoma of the breast, the most responsive cancer, is composed of spheroids of microscopic dimensions whose malignant acini possess a lumen, the lining of which is one cell in thickness. Patients with this cancer excrete considerable quantities of estrogenic substances in the urine and the remaining breast usually secretes milk when challenged with luteotrophin. Adenocarcinoma stands in a special physiologic category among the mammary cancers. (Ann. Surg., Oct., 1954; C. Huggins, M. D., and T. L-Y. Dao, M. D., Chicago, Ill.)

* * * * * *

Acute Hepatic Insufficiency in Chronic Alcoholism

Most chronic alcoholics, with active but uncomplicated cirrhosis, demonstrate rapid improvement in their liver disease following hospitalization and consumption of an adequate diet. At times, however, acute severe hepatic functional impairment occurs, which may clear slowly or progress until the patient dies in hepatic coma. In this situation, the liver

may show, in addition to fat and fibrosis, an extensive lesion characterized by hyaline degeneration and necrosis of parenchymal cells with leucocytic infiltration. This lesion, described by Mallory in 1911 and which occurs in varying degrees of severity in many alcoholics, is so distinctive that it was decided to determine further its clinical significance. To do this, a study was carried out in which the clinical and pathological findings relating to the liver in 56 chronic alcoholics were analyzed. The cases were divided into two groups according to histological findings: (1) those with a moderate amount or more of the lesion, and (2) those with a slight amount. Other histological abnormalities, such as fat and fibrosis, were also evaluated.

From the analysis outlined in the article it is evident that chronic alcoholics may show a characteristic hepatic lesion complex consisting of hyaline degeneration, liver cell necrosis, and parenchymal disorganization. Varying degrees of this lesion complex were seen to occur, and its three histological components, i. e., hyaline degeneration, liver cell necrosis, and parenchymal disorganization, appearing parallel in intensity so that when one was present in more than moderate degree, the other two were usually present. These hepatic abnormalities have been reported several times since the original description by Mallory, but the lack of emphasis of the lesion complex may lead to the conclusion that it is an unusual entity. On the contrary, the experience of the authors indicates that this lesion complex occurs in some degree frequently in hospitalized chronic alcoholics with liver disease who have been drinking until the time of admission to the hospital.

When the lesion complex was severe, it was characteristically associated with marked hepatic functional impairment which sometimes eventuated in typical spontaneous hepatic coma and death. The extent of the parenchymal involvement left little reason to wonder why these patients developed hepatic failure. Hepatomegaly was constant, and usually present were splenomegaly, ascites, and spider telangiectasia. The most obvious evi - dence of the disturbance in hepatic function was bilirubinemia with jaundice, which was usually conspicuous and sometimes was accompanied by acholic stools.

Another conspicuous accompaniment of the lesion complex was a polymorphonuclear leucocytosis, which usually increased as the patient grew worse. There was generally a pronounced decrease in plasma prothrombin concentration. The cephalincholesterol flocculation test was usually markedly positive, although occasionally normal, and the serum alkaline phosphatase was normal in the 5 patients measured. Gastrointestinal bleeding occurred commonly. Several patients developed oliguria with rising serum nonprotein nitrogen concentrations terminally.

The severe acute hepatic disturbance seen clinically seemed to correlate better histologically with the lesion complex described than with

hepatic fat. Most of the patients with a severe degree of the lesion complex also displayed an abundance of fat in their livers, but several exceptions were noted. Of 17 patients who died in hepatic coma, autopsies showed a far-advanced lesion complex; an increase in parenchymal vacuolization was slight in 4 cases and not evident in 1. It may be noted that these 5 patients were in the hospital for an average of 20 days as compared with 8 days for the remaining 12 patients. Serial biopsies in 3 patients with the lesion complex who lived, revealed that hepatic fat resolved more quickly than did the lesion complex and even decreased as 1 patient appeared to become worse. These observations suggest that the 5 patients with little or no hepatic fat had more on admission but lost some in the hospital, even though they became clinically worse. Previous studies suggest that liver function may get worse while hepatic fat decreases, in the absence of this lesion complex, and contrariwise, liver function may improve with no apparent change in hepatic fat content. Several patients were encountered with large amounts of hepatic fat as essentially the only hepatic lesion and little functional impairment was evident. Thus, although it seems that most chronic alcoholics with cirrhosis, drinking up to the time of admission to the hospital, have increases in hepatic fat--sometimes marked--it is possible that the fat has little relationship to function.

Because all patients with this severe lesion complex were chronic alcoholics, thought to be drinking up to the time of admission to the hospital, and because this histological picture, according to the knowledge of the authors, occurs rarely if ever in nonalcoholics, the lesion complex may well be the result of alcohol ingestion, directly or indirectly. It may be that alcohol directly injures the liver; the blood level of alcohol entering the liver is presumably higher than that going to any other organ. Studies in animals, however, do not favor an hepatotoxic action of alcohol. In man, evidence against an hepatotoxic action includes the demonstration that the administration of alcohol in addition to a nutritious diet to chronic alcoholics with liver disease did not prevent hepatic functional and histological improvement in 1 patient or exacerbate the liver disease of 4 patients already treated, even though it was given for as long as 6 to 18 months.

Because the cause of this lesion complex is not known, but may be related to a nutritional deficiency, it would seem reasonable to treat patients thought to have the lesion with adequate nutrition. Clinical impressions bear out this conclusion. 'Most of such patients have severe anorexia, and the frequent offering of food or even tube feeding may have to be employed. Because many are wavering on the edge of hepatic coma, any measure which might induce coma should be avoided. Prominent among deleterious influences are sedatives and hypnotics; certain nitrogenous substances, especially ammonium chloride and large amounts of dietary

protein, and abdominal paracentesis which may be obviated by the use of a sodium-restricted diet. Marked disturbances in serum electrolytes should probably be corrected, although such therapy usually has little effect on the clinical course. Vitamins may be administered although clinical improvement was not observed as a result of this therapy. Parenteral administration of dextrose has been advocated frequently in the treatment of cirrhosis but the present study provided no evidence for any therapeutic benefit in patients with a severe lesion complex. With careful management, many of these patients will probably recover. After recovery, however, the treatment is not concluded and should be directed at what is, perhaps, both the most difficult and most important task of the physician--the permanent withdrawal of alcohol. (Arch. Int. Med., Oct., 1954; G. B. Phillips, M. D., Harvard Medical School and National Institutes of Health; and C. S. Davidson, M. D., Harvard Medical School and Boston City Hospital)

* * * * * *

Clinical Study of Regional Colitis

Regional (segmental) colitis may be defined as an inflammatory disease of unknown etiology involving initially one or more segments of the large intestine, exclusive of the rectum and rectosigmoid, either as a continuous lesion or as multiple discontinuous lesions.

Comparatively little has been written about regional colitis. Furthermore, controversy exists as to whether medical or surgical treatment gives the better result; in connection with surgical treatment, opinion varies as to whether short-circuiting or resective operation is the procedure of choice.

This study was undertaken, therefore, to describe the clinical features of the disease, to compare the results of medical and surgical treatment, and to determine if possible, which of the surgical procedures mentioned is the one of choice.

It has been estimated that regional colitis constitutes 4 to 10% of all cases of chronic ulcerative colitis. As already indicated, the cause is unknown; all investigative work, including pathologic study of the lesions, has given no information as to a specific etiologic agent or agents. It is a disease of young people, having its greatest incidence in the third decade of life. The incidence is approximately the same for both sexes. While no racial predilection has been mentioned in the literature, this study indicates a definite predilection for members of the Jewish race. The literature contains only a rare mention of the disease occurring in Negroes; in this study, only 1 patient was a Negro.

Initially, any segment or segments of the colon may be involved exclusive of the rectum and rectosigmoid. Segments of the right half of

the colon are more frequently involved than the left, although in this study the greater frequency of involvement of the segments of the right half of the colon as compared with the left was not significant. Furthermore, in 12% of the patients in this study, the lesion was confined to the left half of the colon. The term "right-sided regional colitis" would appear, therefore, to be somewhat inaccurate and misleading.

The disease may extend in either direction from the initial site of colonic disease. Involvement of the terminal portion of the ileum, secondary to the main colonic lesion, occurs frequently, having been reported in 40% of the 77 cases reported by Crohn and associates, and in 25% of the 140 cases reported by Barbosa and co-workers. In the cases discussed, the terminal portion of the ileum was involved in 22% of patients. Spread of the disease is thought to occur by direct extension taking place mainly in the mucosa and submucosa.

Although complete remission of symptoms and even disappearance of the objective signs of the disease have been noted after medical treatment, medical management has been disappointing on the whole, and the incidence of recurrence great. For this reason, surgical treatment has been considered at times to be the treatment of choice.

While this study confirms the high incidence of recurrence after medical treatment, it indicates a greater incidence of recurrence after surgical treatment than has been reported previously, probably because of the greater length of the follow-up periods. Data, otherwise obtained, however, appears to indicate a significantly lower incidence of recurrence after surgical treatment than after medical treatment.

The incidence of recurrence has been reported to be greater after short-circuiting procedures than after resection. The disparity in this study between the number of patients treated by short-circuiting operations and the number treated by resection allows no definite conclusions in regard to the relative efficacy of each procedure. However, evaluation of the data suggests that the number of patients who experience recurrences after short-circuiting operations is not significantly greater than that after resection for the same length of follow-up. The data further suggests that the first recurrence after resection is much more likely to result in extension of the lesion to the rectosigmoid and rectum than is the first recurrence after short-circuiting operations. (Surg. Gynec. & Obst., Nov., 1954; H. W. Neuman, M. D., J. A. Bargen, M. D., and E. S. Judd Jr., M. D., Rochester, Minn.)

* * * * * * *

NPH Insulin

Although NPH insulin has been available for general use for some time there still appears to be a reluctance on the part of many physicians and clinics to favor its use over other types of insulin and insulin combinations. This is difficult to understand because familiarity and experience with the newest insulin can hardly fail to reveal its definite superiority. It is, therefore, appropriate to discuss and analyze the reasons why NPH insulin has not attained the popularity it deserves, and at the same time, to review its inherent advantages.

Five types of insulin are now available to the public, and at least eight commonly accepted modes of using them, alone or in combinations. These types are: Insulin; Crystalline Insulin; Protamine Zinc Insulin; Globin Insulin; PZI plus regular insulin in separate injections; PZI plus regular insulin mixed; NPH insulin; NPH plus regular insulin in same syringe.

NPH is an intermediate type of insulin which approaches the ideal because it starts acting almost immediately and yet has an appreciably prolonged effect. Its maximum effect is felt about 8-9 hours after injection and the duration of effect is about 28-30 hours. Roughly, its action is similar to the 2:1 mixture of regular and PZI but is slightly more prolonged and less intense. There are definite advantages of this insulin over the extemporaneous mixing of PZI and regular in the same syringe. The latter procedure is more troublesome to the patient and frequently highly inaccurate, not only because of the difficulty of the technique and the patient's limitations but also because of the variable amount of excess protamine in PZI.

In general it has been found that more NPH must be given to attain control than the sum total of a 2:1 mixture. This is a very slight disadvantage in return for which is obtained a smoother-acting better-timed, and constant-dosage form of insulin whihc is more easily given. However, it is this characteristic of NPH insulin which has led to much unwarranted, premature discouragement in its use. Most physicians have been trained to reduce the dosage by about one-third when transferring a patient to a new insulin.

It is a serious error to think that NPH is a panacea or the answer to all problems of control in diabetes. Naturally, the severe, unstable, "brittle" diabetic still presents the same difficulties, and ofter the phycician will have to be satisfied, as before, with only approximate degrees of control. However, even many of these cases will be controlled in a somewhat better fashion with the use of NPH. In the diabetic requiring large doses of insulin, supplementation of NPH with regular or crystalline insulin may be necessary. This is analagous to the supplementation of PZI with regular insulin in separate injections when the requirement is over 40-60 units of insulin daily. However, a patient taking NPH insulin

will usually not need such supplementation unless the diabetes is severe enough to require 95-100 units daily. This is a distinct advantage over PZI, as a far greater percentage of diabetics requiring insulin may now be controlled with one insulin alone. As with the mixtures of regular and PZI, the higher the insulin requirement the greater should be the proportion of the fast acting component of the insulin to the slow component until the ratio actually resembles the 3:1 mixture of regular and PZI.

It is believed that greater knowledge of the characteristics of NPH insulin will lead to its proper use, and to the demonstration that it is the most satisfactory form of insulin available for clinical use today. (Digestive Diseases, Oct., 1954; S. K. Fineberg, M. D., Harlem Hospital, New York, N. Y.)

* * * * * *

Early Atypical Manifestations of Leukemia

The diagnosis of leukemia by clinical and laboratory studies is usually not difficult. Occasionally, however, the initial manifestations of the leukemic process may be atypical and precede the onset of clinically recognizable leukemia by several years. The abnormal hematologic findings are not specific and consist of various combinations of anemia leukopenia, neutropenia, and thrombocytopenia, with a hyperactive marrow. The spleen is usually not palpable or only slightly enlarged. Initially these cases often resemble the syndrome usually designated as "primary" splenic panhematopenia. This report deals with 10 patients manifesting the above findings; they were studied during the past 5 years. Six of these patients subsequently developed typical leukemia with a rapidly fatal course. One patient died of reticulum cell sarcoma, one of aplastic anemia, and one of hemorrhage associated with thrombocytopenia. The one patient who remains alive is slowly developing hematologic changes strongly suggestive of leukemia.

These cases demonstrate that various combinations of anemia, leukopenia, neutropenia, and thrombocytopenia with a hyperactive marrow may precede the onset of clinically recognizable leukemia or lymphoma by 3 months to 2 years or longer. The average time from the date at which abnormal hematologic findings were first elicited to the onset of clinically recognizable leukemia was 20.6 months. Similar hematologic manifestations preceding leukemia have recently been described by Block. The longest preleukemic phases described by these authors was 20 months.

In none of these patients who ultimately developed leukemia was it possible to establish the diagnosis of leukemia initially. Complete hematologic and bone-marrow studies did not reveal leukemia when these patients were first seen. Furthermore, histologic examination of the spleen

revealed no specific morphologic lesion in those patients subjected to splenectomy. Thus the absence of immature cells in the peripheral blood and marrow, as well as the absence of a leukemic infiltration in the spleen, does not rule out the possibility that leukemia will subsequently develop in patients with pancytopenia and a hyperactive marrow.

In the majority of these patients the initial findings were compatible with a diagnosis of hypersplenism or "primary" splenic panhematopenia. The presence of anemia, leukopenia, neutropenia, thrombocytopenia, and a hyperactive bone marrow, and the absence of a secondary disease process in the spleen, fulfilled the criteria for such a diagnosis. In no instance, however, was splenectomy of significant benefit; this is in direct contrast to the experience of others. These cases, therefore, are indistinguishable from cases which have been described as splenic panhematopenia. It is possible that follow-up studies of cases previously described as "primary" splenic panhematopenia may reveal, in a significant percentage of cases, the ultimate development of leukemia, lymphoma, or other disease entities. (Ann. Int. Med., Oct., 1954; G. C. Meacham, M. D., and A. S. Weisberger, M. D., Cleveland, O.)

* * * * * *

Stannous Fluoride-Containing Dentrifice

Increased effort is being made to resolve the problem of reducing the incidence of dental caries in children through the use of prophylactic dentifrice preparations. While a lack of agreement exists in the reported efficiency of many of these preparations, it is felt that the attention which has been focused upon the use of dentifrices may have had a beneficial effect by stimulating many persons to improve oral hygiene. A reduction in dental caries by the prompt brushing of the teeth with a conventional dentifrice immediately following meals has been reported.

The incorporation of fluorides into a dentifrice as a means of increasing its value for reducing dental caries has long been considered an interesting possibility. It appears that if the proper dentifrice and fluoride combinations were used it might be possible to produce a significant reduction in dental-caries experience in children. The nature of the abrasive seems to warrant careful consideration. Bibby has stated that the fluoride dentifrice used in his study still retained its "available" fluoride. "The possibility that the mixing of sodium fluoride with other dentifrice constituents rendered it inactive is largely ruled out by preliminary test tube studies which showed that the dentifrice mixtures exerted a solubility reducing effect on powdered enamel." In view of these findings, it was considered important to select the specific fluoride and dentifrice formulation on the basis of extensive preliminary work.

Stannous fluoride has been shown to be superior to sodium fluoride in reducing enamel solubility, whole tooth solubility, and caries in rats, hamsters, and human beings. Moreover, good evidence exists that tin fluoride is less toxic than sodium fluoride. The selection of a dentifrice abrasive was made on the basis of enamel solubility reduction tests on numerous abrasive fluoride combinations. This led to the selection of heat-treated calcium phosphate as the most compatible abrasive. The remaining constituents of the tooth paste, such as binder, humectant, flavor, and detergent, were of the type sold for use in conventional tooth pastes and are commonly available. The experimental tooth pastes, No. 2, contained 0.4% stannous fluoride (0.1% fluorine). The control tooth paste, No. 1, was the same as No. 2 in every respect except that it did not contain stannous fluoride. The two dentifrices were indistinguishable by color, flavor, consistency, or in any other way. Both were packaged in plain white containers with only the identifying numbers printed on them.

A stannous fluoride-containing dentifrice at a fluorine concentration of 1000 ppm. and a tin concentration of 3200 ppm. results in a pronounced reduction in dental caries in 6 to 15-year-old children after using the dentifrice in an unsupervised manner for a period of 6 months. When compared to an identical control dentifrice not containing stannous fluoride, a 53% reduction in DMF teeth and a 72% reduction in DMF surfaces resulted. There appeared to be complete protection against interproximal lesions, while the reduction in buccal-lingual surfaces was 70% and occlusal surfaces 26%. All of the reductions are highly significant except the reduction in occlusal surfaces. The reduction of caries appears to be related to the subjects' ages, with the greatest protection occurring in the older age groups of the children. The effect of possible toxic effects through the continued use of a stannous fluoride dentifrice is discussed. (J. Dent. Res., Oct., 1954; J.C. Muhler, A. W. Radike, W. H. Nebergall, and H. G. Day., School of Dentistry, Indiana University, Bloomington, Ind.)

* * * * * *

Navy Dental Films

Rear Admiral R. W. Taylor, (DC) USN, Commanding Officer, U.S. Naval Dental School, has announced that the School, with the authorization of the Bureau of Medicine and Surgery, is having a number of new films made to augment its training materials for use at the Naval Dental School and at dental facilities throughout the Navy. Begun during the tour of Captain J. S. Allen (DC) USN, the projects are being continued and completed under the direction of Captain M. C. Craig (DC) USN, who relieved Captain Allen on 30 June 1954.

Research and preparation of scripts are under the supervision of the Audio-Visual Department which is under the direction of Captain R. V. Schultz (MC) USN, the Officer in Charge, with Dr. J. W. Page, the director of the Medical Film Section, and Mr. C. A. Greene in charge of the present dental film projects.

The four films will be in color, and each will be approximately 20 minutes in length. They are now in various stages of production, under the general supervision of the Naval Photographic Center, Anacostia, D. C. The film, "Aseptic Procedure in Oral Surgery," has recently been completed and will soon be distributed; it shows the steps in establishing and maintaining isolation against bacterial invasion during an oral surgical procedure where the danger of contamination is just as great as in general surgery. The film was produced by the Princeton Film Center.

"The Rubber Dam in Dentistry," currently being produced by Byron, Inc., of Washington, D. C., will demonstrate the technics of preparation and application of the rubber dam--an important part of the armamentarium for restorative treatment--and will emphasize the speed and simplicity of its application. The script from which this film will be produced has just been completed.

"Complete Dentures," at script stage and also being produced by Byron, Inc., carries the explanatory subtitle, "Correction of Errors in Fabrication and Registration." This motion picture will present the dental officer and the technician as a team, and will show in detail the procedures for elimination of errors that occur in the fabrication of dentures. In addition to the technics involved, the film will call attention to the time factor in the program of dental officer and patient.

"Oral Prophylaxis" has recently been approved by the Naval Film Production Board of Review as a film subject. Personnel of the Audio-Visual Department and of the Naval Dental School have prepared the initial research material upon which the script will be based; work will continue as soon as the contract is let for writing and production. The film is planned for instruction in the systematic method of oral Prophylactic treatment given by the dental technician under direction of the dental officer.

A number of officers of the staff of the Naval Dental School are assigned to act as technical consultants to the Naval Dental School Training Aids Officer for the various subjects treated in these films. They are: Cdr K. L. Longeway, Cdr J. V. Niiranen, Cdr Samstone Holmes, Cdr C. H. Blackstone, Cdr A. G. Nielsen, Cdr J. C. Chapman, and LCdr C. L Foss. (DentDiv, BuMed)

* * * * * *

Medical Department Correspondence Course-- Naval Preventive Medicine

The Medical Department Correspondence Course, Naval Preventive Medicine, NavPers 10703 (1954 Revision), is now available for distribution to eligible applicants.

The purpose of this course is two-fold: To provide suitable correspondence training material for regular and reserve Medical Department personnel, and to present a guide for general application in the highly important area of public health. The text is assembled in three separate publications designed to pinpoint specific naval medical problems and to delineate approved methods and measures for prevention and control of disease.

This course consists of twelve (12) objective type assignments and, effective 1 November 1954 will be re-evaluated at twenty-four (24) Naval Reserve promotion and non-disability retirement points. Personnel enrolled prior to 1 November 1954 will receive retirement and promotion points authorized at the time of enrollment. Those who have completed the earlier type course will not receive additional credit for completion of this course. (NavMedSch, NNMC, Bethesda)

* * * * * *

Medical Department Correspondence Course-- Submarine Medicine Practice

The Medical Department Correspondence Course, Submarine Medicine Practice, NavPers 10707 (1954 Revision), is now available for distribution to eligible applicants.

The purpose of this course is to provide a comprehensive guide which can be utilized for training and indoctrinating regular and reserve Medical Department personnel with the many complex medical problems connected with submarine warfare. There have been assembled in this course, in lucid form, the highlights of latest developments, and the accumulated knowledge and experience resulting from years of research and investigation.

The material covers personnel selection procedures, improvement of submarine habitability factors, submarine escape and rescue operations, and the medical aspects of other undersea operational studies directed toward the improvement of the military effectiveness of the submarine and amphibious forces.

This course consists of eight (8) objective type assignments, and effective 1 November 1954, will be re-evaluated at twenty-four (24) Naval Reserve promotion and non-disability retirement points. Personnel

enrolled prior to 1 November 1954 will receive retirement and promotion points authorized at the time of enrollment. Those who have completed the earlier type course will not receive additional credit for completion of this course. (NavMedSch, NNMC, Bethesda)

* * * * * *

Medical Department Correspondence Course-- Radiological Defense and Atomic Medicine

The Medical Department Correspondence Course, Radiological Defense and Atomic Medicine, NavPers 10701 (1954 Revision), is now available for distribution to eligible applicants.

The advent of nuclear weapons has brought to the practice of military medicine a great number of new questions, brilliant prospects, and inescapable concomitant responsibilities which this course is designed to answer. While the material is not considered complete in any sense of the word, it is believed to offer an excellent introduction into the intricate and rapidly developing field of atomic medicine.

The text material is the combined effort of a number of outstanding military and civilian scientists to produce a suitable guide for regular and reserve Medical Department personnel.

This course consists of eleven (11) objective type assignments and, effective 1 November 1954, will be re-evaluated at thirty-two (32) Naval Reserve promotion and non-disability retirement points. Personnel enrolled prior to 1 November 1954 will receive retirement and promotion points authorized at the time of enrollment. Those who have completed the earlier type course will not receive additional credit for completion of this course. (NavMedSch, NNMC, Bethesda)

* * * * * *

Medical Department Correspondence Course-- Special Clinical Services

The Medical Department Correspondence Course, Special Clinical Services, (General) NavPers 10702 (1954 Revision) is now available for distribution to eligible applicants.

The text material of this course provides specific information for the proper technical operation of various types of x-ray, electrocardiograph, and basal metabolism appliances; criteria for professional diagnostic procedures; and principles for the rehabilitation of the physically handicapped.

This course consists of eight (8) objective type assignments and is

evaluated at twenty-four (24) Naval Reserve promotion and non-disability retirement points. Personnel who completed the earlier thesis type course will not receive additional credit for completion of this course. (NavMedSch, NNMC, Bethesda)

* * * * * *

Medical Department Correspondence Course-- Insect, Pest, and Rodent Control

The Medical Department Correspondence Course, Insect, Pest, and Rodent Control, NavPers 10705 (1954 Revision), is now available for distribution to eligible applicants.

The purpose of this course is to provide Medical Department personnel with current criteria and operational procedures, to be used by Navy personnel concerned with effective preventive and corrective measures necessary to protect naval activities, ashore and afloat, against damage from insects, pests, and rodents infestation.

The text material, while primarily designed for control of pernicious animals, can also be utilized advantageously and correlated with fire protection, safety engineering, general sanitary programs, and for the promotion of better public health standards.

This course is based upon the latest available material. It consists of eight (8) objective type assignments and is evaluated at eighteen (18) Naval Reserve promotion and non-disability retirement points. Personnel who completed the earlier thesis type course will receive additional credit for completion of this course. (MavMedSch, NNMC, Bethesda)

* * * * * *

Advanced Course in Environmental Sanitation

Requests are desired from interested MSC and HC officers, for assignment to duty under instruction in Advanced Environmental Sanitation, at the University of California, Berkeley, California. The course is of five and one-half months' duration and commences 7 February 1955.

Officers eligible are those meeting the requirements for the course as shown in BuMed Notice 1520 of 6 October 1954. (ProfDiv, BuMed)

* * * * * *

Refresher Course in Anesthesiology

The USAF Medical Service will present a special 5-day short course in Anesthesiology, at the School of Anesthesiology, USAF Hospital, Lackland

Air Force Base, San Antonio, Texas, 4-9 July 1955.

Medical officers interested in attending the above course should submit official requests to BuMed. Authorization orders only will be provided. (ProfDiv, BuMed)

* * * * * *

Board Eligible Flight Surgeons

A five-months course in preventive medicine and aviation medicine will be given after the first of the year for those medical officers who have applied for certification as specialists in Aviation Medicine by the American Board of Preventive Medicine and were found to be "board eligible."

This course will begin early in 1955 at the National Naval Medical Center, Bethesda, Maryland, and the Bureau of Medicine and Surgery; will be of five months' duration, and; will entail a permanent change of duty. It has been approved by the American Board of Preventive Medicine and is intended to prepare the "board eligible" officer for the Board examination which he will be required to pass before being certified as a diplomat.

Those flight surgeons who have received official notice from Dr. Ernest L. Stebbins, the Secretary of the American Board of Preventive Medicine, that they are eligible to take the Board's examination and who are interested in doing so, should forward to the Chief, Bureau of Medicine and Surgery, Navy Department, Washington 25, D. C., (Attention: Director, Aviation Medicine Division), an official request asking to be considered for assignment to the course. Full consideration will be given all requests; however, the needs of the service will govern the availability of each applicant. (AvDiv, BuMed)

* * * * * *

Reserve Selection Board for Promotion to Captain and Commander

A selection board is scheduled to convene at the Navy Department, Washington, D. C. on or about 4 January 1955 to recommend Naval Reserve officers of the Medical, Dental, Medical Service, and Nurse Corps on inactive duty for promotion to captain and commander. Officers eligible for consideration by this board for promotion to captain are those commanders on inactive duty in an active status whose date of rank as commander is prior to 10 July 1945. Those officers eligible for consideration for promotion to commander are those lieutenant commanders on inactive duty in an active status whose date of rank is prior to 25 October 1950. There are no Medical Service or Nurse Corps officers eligible for consideration by this board for promotion to captain.

Individual officers concerned should take necessary action to ensure that fitness reports for training duty, annual fitness reports, and annurl qualification questionnaires covering periods ending prior to the convening date of this board are submitted to the Bureau of Naval Personnel in time to be included in his records when presented to the selection board.

Naval Reserve medical officers on inactive duty from different geographical sections of the country will constitute the majority membership of the board. (ResDiv, BuMed)

* * * * * *

Board Certifications

American Board of Internal Medicine

LT John M. Hudson (MC) USNR (Inactive)
LTJG Frederick A. Oldenburg (MC) USNR (Inactive)
LT John H. Peters (MC) USNR (Inactive)

American Board of Ophthalmology

LT Thomas G. Dickinson (MC) USNR (Inactive)

American Board of Pediatrics

LT William C. Blair (MC) USNR (Inactive)
LT Richard D. Simon (MC) USNR (Inactive)

American Board of Psychiatry and Neurology

LT Jewett Goldsmith (MC) USNR (Inactive)

American Board of Radiology

LT Loy T. Brown (MC) USN
CDR C. D. Burroughs (MC) USN
LTJG Edward K. Carter (MC) USNR (Inactive)
LCDR Robert S. Kibler (MC) USN
CDR George E. F. Stocker (MC) USN

American Board of Surgery

LTJG DeWitt T. Brock, Jr. (MC) USNR (Inactive)
LT Irvine K. Furman (MC) USNR (Inactive)
LT James B. Holloway, Jr. (MC) USNR (Inactive)
LT Louie B. Jenkins (MC) USNR (Inactive)
LT Alphonse H. Meyer, Jr. (MC) USNR (Inactive)
LCDR Robert S. Stockton (MC) USNR (Inactive)
LCDR Irvin H. Trincher (MC) USNR (Inactive)

American Board of Urology

LT Jack Hughes (MC) USNR (Inactive)

BUMED NOTICE 1741 30 September 1954

From: Chief, Bureau of Medicine and Surgery
To: Commanding Officers, U. S. Naval Hospitals

Subj: Life insurance disability claims

Ref: (a) BUMEDINST 1741. 1

This Notice insures compliance with the provisions of reference (a).

* * * * * *

BUMED NOTICE 6150 1 October 1954

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations Having Medical Department Personnel Regularly Assigned

Subj: Standard Form 88, Report of Medical Examination; recording of marks and scars on

Ref: (a) Art. 16-35, ManMed Dept
(b) BUMEDINST 6150. 7

This Notice invites attention to the requirements of references (a) and (b) relative to the recording of marks and scars on Standard Form 88.

* * * * * *

BUMED NOTICE 6320 13 October 1954

From: Chief, Bureau of Medicine and Surgery
To: All Hospitals, Continental U. S. Stations Having Infirmaries, and All Extracontinental Stations Having Medical Corps Personnel Regularly Assigned

Subj: Beds and Patients Report (DD Form 443), changes in reporting requirements

Ref: (a) BUMEDINST 6320. 8B

This Notice summarized major changes in reporting requirements for DD Form 443 included in reference (a), which is being distributed concurrently to all addresses.

BUMED INSTRUCTION 6320.8B 13 October 1954

From: Chief, Bureau of Medicine and Surgery
To: All Hospitals, Continental U.S. Stations Having Infirmaries, and All Extracontinental Stations Having Medical Corps Personnel Regularly Assigned

Subj: Beds and Patients Report (DDForm 443), reporting requirements for

Ref: (a) BUMEDINST 6310.3
(b) Joint Armed Forces Statistical Classification and Basic Diagnostic Nomenclature of Diseases and Injuries (NavMed P-1254)

This Instruction sets forth the requirements for reporting beds and patients data on DD Form 443 as needed by this Bureau, the Bureau of the Budget, and the Department of Defense.

BUMEDINST 6320.8A of 1 June 1954 is canceled.

* * * * * *

BUMED NOTICE 4247 18 October 1954

From: Chief, Bureau of Medicine and Surgery
To: All Naval Hospitals and the National Naval Medical Center

Subj: Federal taxes imposed under Section 4251 Internal Revenue Code of 1954 applicable to communication services classified as unofficial

Ref: (a) NAVCOMPTNOTE 4247 of 27 Sept 1954
(b) NavCompt Manual, Volume 3, Paragraphs 035405-4 (e) and 035435

The purpose of this Notice is to inform addressees of the content of reference (a).

* * * * * *

BUMED INSTRUCTION 4442.1A 22 October 1954

From: Chief, Bureau of Medicine and Surgery
To: Ships and Stations Having Medical/Dental Personnel Regularly Assigned

Subj: Levels of supply for medical and dental stores at consumer activities

Ref: (a) Navy Property Redistribution and Disposal Regulation No. 1 (Revised Aug. 1, 1951)

Encl: (1) Authorized Levels of Supply Applicable to Ships Including Hospitals in Hospital Ships
(2) Authorized Levels of Supply Applicable to Continental Naval Hospitals and All Continental Shore Stations
(3) Authorized Levels of Supply Applicable to Extra-Continental Shore Stations and Extra-Continental Hospitals

This Instruction defines the levels of supply for medical and dental material for all consumer activities of the Navy and prescribes the method of determination and disposition of excesses.

BuMed Instructions 4442.1, 6700.4, and 6710.4 are canceled.

* * * * * *

BUMED INSTRUCTION 6222.3B 26 October 1954

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations Having Medical Personnel Regularly Assigned

Subj: Venereal disease; prevention of

Ref: (a) SECNAVINST 6222.1
(b) U.S.N Medical News Letter, Vol. 23, No. 3, page 37

This Instruction supplements reference (a) in respect to current recommendations on the use of certain medical procedures for the prevention of venereal disease.

BuMed Instructions 6222.2A, and 6222.3A are cancelled.

* * * * * *

BUMED NOTICE 5210 26 October 1954

From: Chief, Bureau of Medicine and Surgery
To: All Naval Hospitals, Hospital Ships, and Stations Having Infirmaries

Subj: Clinical records and x-rays of Army and Air Force members; disposition of

Ref: (a) Art. 23-303 (6) (d), Item 617, ManMed Dept

This Notice directs attention to reference (a), relating to the disposition of clinical records and x-rays of Army and Air Force members treated in Navy medical activities.

* * * * * *

BUMED INSTRUCTION 6230.6 SUP 1 26 October 1954

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations

Subj: Globulin, poliomyelitis, immune (human), 10cc, Stock No. 6505-299-8268, for the prophylaxis of acute anterior poliomyelitis in military personnel and in dependents of military personnel

Ref: (a) BUMED INSTRUCTION 6230.6 of 19 May 1954, with enclosure thereto

Encl: (1) "Agreement Relative to the Provision of Poliomyelitis Immune Globulin and Its Use Against Poliomyelitis," an amended statement by the Executive Committee of the Association of State and Territorial Health Officers, published by the Department of Health, Education, and Welfare, 19 Aug 1954

This Instruction transmits additional information concerning use of subject material.

* * * * * *

BUMED NOTICE 6710 1 November 1954

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations Having Medical/Dental Personnel Regularly Assigned

Subj: Antibiotics; extension of potency dates

Ref: (a) Medical and Dental Materiel Bulletin (MDMB), Edition No. 47 of 1 October 1954

This Instruction provides authority to extend the potency dates of certain antibiotics.

* * * * * *

BUMED INSTRUCTION 6222.1 SUP 1 3 November 1954

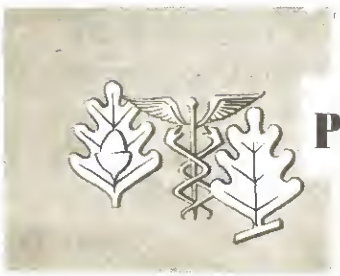
From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations Having Medical Corps Personnel Regularly Assigned

Subj: Influenza Detection

Ref: (a) BUMEDINST 6220.1 (Influenza detection)
(b) BUMEDNOTE 6230 of 31 Aug 1954 (Influenza vaccine; use of)

This Instruction effects certain interim modifications of reference (a).

* * * * * *



PREVENTIVE MEDICINE SECTION

Communicable Disease Control

Yellow Fever in the Americas

The recent outbreak of yellow fever in Trinidad, B. W. I., emphasizes the need for continuous and rigid control measures to keep this disease in check. Although the disease was known to be present in monkeys in the jungle, until the recent outbreak there had been no human yellow fever in Trinidad for 50 years. Cases have occurred in recent

years, however, in South and Central American countries. During the first 8 months of 1954, 7 cases were reported in Colombia, 18 in Venezuela, 1 in Peru, and 9 in Trinidad.

Quarantine regulations as set forth in General Order 20 are designed to prevent the importation of yellow fever into the United States. Since yellow fever vaccine is highly effective, individuals immunized more than 10 days before arrival are considered to be free of the disease. Planes and ships arriving from areas which, on the basis of human cases, have been declared "yellow fever infected areas," must have disinsectization carried out before arrival, and all passengers and crew members must present evidence that they have been immunized 10 or more days previously. BuMed Instruction 6230.1 requires that personnel traveling into "yellow fever endemic areas," where the disease is known to be present in monkeys and mosquitoes, be vaccinated for their own protection. For personnel traveling into an infected area, vaccination is more important. Planes and ships touching at ports in infected areas en route to other overseas areas must satisfy quarantine requirements at their destination also, and non-immunized individuals may be held in quarantine at their destination for 10 days or more.

* * * * * *

Tuberculosis Control

Tuberculosis Control Program in the U.S. Navy

Tuberculosis among seamen has always been a problem of considerable extent ever since man began to sail in ships. Early in World War II the Navy foresaw the advantages of routine x-ray examination of the chest for the discovery of unrecognized cases of tuberculosis, and pioneered in the development of modern photofluorographic chest x-ray equipment. From this beginning evolved a tuberculosis control program for the Navy which is considered by many, and particularly by the National Tuberculosis Association, to be one of the best case-finding programs for tuberculosis in the country. Frequent inquiries are received from members of the Armed Forces in regard to various phases of this program, and it is believed that a brief discussion concerning objectives of the program and availability of the services offered will be of interest.

In 1941 the Navy embarked upon a tuberculosis control program the purpose of which was to reduce the incidence of tuberculosis in the naval service to a minimum. Development of the program through the years has resulted in the following: (1) provision for roentgenographic chest examination of both uniformed and civilian personnel at time of entering service, at annual intervals when practicable thereafter, and

at time of leaving service; (2) tuberculin skin testing of all Navy and Marine Corps recruits, and a special study of medical and dental personnel, in whom the incidence of tuberculosis is almost twice that in the remainder of the Navy; and (3) the isolation, study, and treatment of personnel suspected of having active pulmonary tuberculosis at diagnostic and treatment centers established at the U. S. Naval Hospital, St. Albans, Long Island, New York, and the U. S. Naval Hospital, San Diego, California.

At the present time there are 102 photofluorographic (70MM) units distributed at strategic locations in the United States and overseas, including 11 mobile units and 2 transportable units, to accomplish the roentgenological surveys. Last year over a million chest x-rays of service personnel, and approximately a half million x-rays of civilian personnel were taken. Many thousands of civilians, who sometimes work intimately with our service personnel and may be a source of infection, are x-rayed, and dependents of naval personnel who are 15 years of age or older are encouraged to have roentgenographic examinations of the chest at the same time and place as naval personnel.

In order to attain greatest effectiveness, the case-finding program is coordinated by the Tuberculosis Control Officer of the Preventive Medicine Division, Bureau of Medicine and Surgery, to ensure that all persons with abnormal roentgenographic findings in the chest are investigated further. A course in photofluorography is maintained by the Bureau of Medicine and Surgery to instruct interested medical officers in the operation of the equipment and in the interpretation of the films, in order that such trained physicians may be assigned to key locations, and to insure a uniformly effective program throughout the Navy with recognition of pathology "on the spot." When the photofluorogram reveals suspicious findings, reexamination is made by means of 14x17 inch roentgenograms. If the second examination of a service person confirms the suspicious findings, he is referred to a naval hospital for consultation and for admission, if admission is advised. Civilian personnel are referred to their private physicians or to the Public Health Service.

Although the primary purpose of this program is integrated with the nation-wide effort to eradicate pulmonary tuberculosis, an additional dividend is obtained by the early recognition of other types of cardiorespiratory pathology which are of increasing importance today. Early recognition of pulmonary and cardiac disease in its latent or minimal stage helps to ensure against the loss of trained personnel, and reduces the length of costly medical care and rehabilitation.

All photofluorographic film is forwarded to the Bureau of Medicine and Surgery for review and filing. This review or second reading of films reveals an additional 10% of individuals with suspicious x-rays requiring further clinical study. The review also furnishes information which permits maintenance of uniform professional and technical standards in the photofluorographic examination. After completion of the review, the

photofluorographic film is forwarded to the U.S. Naval Records Management Center, Garden City, Long Island, New York, for permanent filing. These films are readily available and serve as aids to clinicians in determining the age and character of pulmonary lesions to Board of Medical Survey, Retiring Boards, Adjudication Boards, and also for determining the line of duty status and disabilities attributed to diseases of the chest.

By the study of individuals who convert to a positive reaction with the tuberculin test (particularly those who have more than average exposure to the disease, e. g., members of the Medical Department) it is hoped that further sources of infection will be found and better methods of protection developed. The conversion of the tuberculin test generally can give the earliest information that an individual has been invaded by the tubercle bacillus, and requires that close observation be maintained to determine whether that individual's natural resistance will overcome this primary infection or whether the infection will progress to a secondary or clinical stage.

By such methods persons who have tuberculosis or other disqualifying defects of the chest are excluded from the service. Prompt discovery and isolation of personnel, suffering from pulmonary tuberculosis in the communicable form, aids in prevention of the spread of disease within the service. Early treatment of those individuals with incipient or minimal tuberculosis, who almost invariably are asymptomatic at that stage, also aids in the reduction of both hospitalization requirements and mortality from the disease. These methods also permit those persons who have conditions of questionable clinical significance within the chest to be followed by serial x-rays and other studies.

The results of this program and further information on some of the above-mentioned methods will be dealt with in more detail in subsequent articles. (J. F. Chace, CDR MC USN, Preventive Medicine Division, Bureau of Medicine and Surgery).

* * * * * *

General Sanitation

Contamination of Japanese Fruits and Vegetables with Helminth Eggs of Human Origin

The consumption of indigenous raw fruits and vegetables of Japan has long been regarded as a potential health hazard because of: (1) the high incidence of enteric parasites among all ages of the Japanese people; (2) the universal practice of utilizing night soil to fertilize crops; and (3) the presence of eggs on vegetables that grow in or upon the soil.

In the spring of 1953, consideration was given to the utilization of indigenous produce to supplement foodstuffs from the United States. An

investigation was, therefore, initiated to determine the degree to which such produce was contaminated with infective helminth ova. The fruits and vegetables examined were procured in Tokyo because this area is the focus of produce distribution for much of Japan and allows a wide selection of available varieties.

A preliminary study was made of agricultural practices and marketing procedures to determine the potential sources of contamination. It was found that human excrement (night soil) collected in any sizeable population center is delivered to initial receiving points in farm centers. Normally this is allowed to "age" for a period of about 2 weeks in huge partitioned concrete vats which are centrally located to serve the needs of surrounding farms. After sale to individual farmers the night soil is again stored and aged for 50-60 days to permit fermentation and concomitant increase of available nitrogen. In March the fields are broken and fertilized prior to the general planting season in April and May. During the growing stage crops receive repeated applications of aged night-soil ladled between the rows. These applications constitute the first and second source of contamination. Fertilizing is suspended one to two weeks prior to harvest. After harvest the vegetables (leaf and root types) are processed at collecting points in the fields by removing decayed or damaged portions, washing in available ponds or ditches (the third source of contamination) and bundling into market-size units. Certain varieties such as lettuce and cabbage which spoil easily are processed as stated with the exception of the washing. Fruits generally are boxed and protected with some form of packing material, rice straw and rice hulls commonly being employed. Tomatoes and pod vegetables are packed in bulk in newspaper-lined containers.

Fruits and vegetables are moved quickly to market centers, sold to wholesalers who in turn distribute them to retail markets. This undoubtedly introduces a fourth source of contamination.

Beginning in February 1953, soil samples and night soil samples were obtained from farms in the environs of Tokyo and examined for human parasitic forms. Soil, taken from fields fertilized 5 days and 19 days respectively prior to sampling, contained neither ova nor cysts of human or animal origin. Samples of night soil stored in a community container for less than one week revealed numerous ova of Ascaris lumbricoides and lesser numbers of hookworm and Trichuris trichiura ova, all of which appeared viable. Numerous cysts resembling those of Endamoeba coli were also found. Night soil stored at least 50 days showed only one partially developed and questionably viable Ascaris egg. This observation tends to confirm the prevalent idea that the fermentative process destroys helminth eggs and protozoan cysts.

Starting in April and continuing through September, a wide variety of produce was selected for examination. This was obtained from the

Kanda Market in Tokyo. The surfaces were cleaned with the aid of a fine hand brush and water containing a liquid detergent. The suspension was centrifuged and the sediment examined microscopically for ova and cysts.

Table 1. Results of Examination of Produce of Several Types and of Packing Materials, Kanda Market, Tokyo, Japan

	Kilograms	Parasitic Forms Seen
Category A*	81.9	None
Category B*	75.2	Ascaris ova Mature ..... 2 Immature ..... 7 Degenerate 7
Category C*	60.5	Ascaris ova Mature ..... 1 Immature ..... 3 Degenerate ..... 8 Trichuris ova Degenerate ..... 1 Capillaria sp. ova Immature ..... 4 Degenerate ..... 7 Toxacara sp. ova Immature ..... 10 Degenerate ..... 8 Endamoeba sp. cysts - numerous
Packing Materials**	0.3	Capillaria sp. ova Degenerate 2

*See text for description. ** Rice straw and rice hulls.

Table 1. lists three categories of fruits and vegetables examined and the results. The categories of produce and criteria for local procurement have been established by the Preventive Medicine Officer, Army Forces Far East. Category A is represented in this study by cherries, grapes, melons, citrus fruits, peaches, et cetera. In group B are included vegetables that are ordinarily cooked before being eaten and do not require inspection, as represented by eggplant, green beans, mushrooms,

spinach, squash, tomatoes, and turnips. Category C is comprised of berries of all types and salad vegetables such as green onions, cabbage, lettuce, parsley, radishes, et cetera. These require inspection and certification of chemical fertilization.

It is evident from this data that the fruits and vegetables examined were not contaminated to any significant extent with infective parasitic forms. While strawberries are generally considered to be heavily contaminated, only one degenerate Ascaris egg was found among 11.6 kilograms of the fruit. The level of contamination among salad vegetables, which constitute the greatest potential hazard, was relatively high; however, the actual amount of infectious material was low. There is no doubt that these vegetables should still be treated with caution.

In a recent investigation, Fueki observed extensive contamination of leaf and root vegetables with Ascaris eggs. In the examination of 1530 specimens of 15 salad-type vegetables obtained from small markets and home gardens during a year's time, 2100 eggs, or a mean of 1.4 eggs per specimen, were found. Approximately 18% of the eggs were embryonated and apparently viable. The inconsistency between observations in the two investigations cannot be attributed to purely technical differences. The sediment recovered from vegetables in our series was small, allowing for direct examination of the total. The use of a flotation technic by Fueki suggests that he dealt with dirtier vegetables, which would account for more eggs. These investigations suggest that different lots of fruits and vegetables differ in degree of contamination, and that the source of the produce should be considered prior to its selection. The present observations indicate that a wide variety of vegetables and fruits obtained from the Kanda Market were not heavily contaminated and would have been relatively safe for use if reasonable precautions were observed. (Clinical Laboratory and Research Report, Department of the Army, 406th Medical General Laboratory and Far East Medical Research Unit, 1953)

* * * * * *

Vessel Potable Watering Points

The Medical Department is charged with the responsibility for making recommendations to ensure an adequate supply of potable water (Article 22-14, Manual of the Medical Department). To comply with this responsibility, all Medical Department personnel should be cognizant of the "Official Classification of Vessel Watering Points," promulgated by the U.S. Public Health Service, Department of Health, Education, and Welfare. This list shows the official classification of all vessel watering points for the loading of potable water in all ports of call in the United States and its possessions.

Lists are issued on January 1 and July 1 of each year. Each list supersedes all previous lists. Copies may be obtained from the Regional Offices of the U. S. Public Health Service as listed in BuMed Instruction 6200. 2.

* * * * * *

Protecting Water Supply Against Intentional Contamination

Water supplies could become contaminated in time of emergency through physical damage, fission products, and from biological or chemical warfare agents. It is possible to add sufficient radioactive materials to water to produce casualties. Practical considerations of obtaining, transporting, and handling the materials make this unlikely. Limiting values for emergency use of water contaminated with radioactive materials have been set up. Suitable detection and measurement devices are available. Existing water treatment plant facilities are generally inadequate to handle radioactive contamination, except in very small amounts. Various treatment methods including flocculation, sedimentation, softening, ion exchange complexation, distillation, and treatment with clay, steel wool, or activated carbon are available. Combinations of these would likely be needed.

Biological contaminants represent a threat to public water supplies, and include bacteria, rickettsiae, viruses, and toxins. Such materials may be used directly on distribution systems. Detection of such materials would not be revealed by the usual laboratory tests. Specially trained units may have to be set up to test for such materials. The carrying and frequent checking of a free residual chlorine in water systems is an important safeguard against biological materials and offers a partial means of detection because changes from normal amounts may be viewed with suspicion. Boiling serves as an emergency protective measure.

Water can be contaminated with chemical warfare agents also. Newer materials include nitrogen mustards, fluorophosphates, and fluoroacetates. The mustards act as vesicants or blister gases, the fluorophosphates are enzyme poisoners, the so-called nerve gases and the fluoroacetates act on the central nervous system. Detection of these materials by chemical tests is possible but may be difficult. The fluorophosphates and fluoroacetates hydrolyze under alkaline conditions fairly rapidly bringing about decontamination. However, in at least one case, the substance, Tabun, breaks down to cyanide, offering a secondary contamination problem.

The author is of the opinion that more information should be given to the public on radiological, biological, and chemical warfare agents, and that a greater program should be supported in this field. (Supplement, Willing Water No. 26, American Water Works Association, Feb., 1954; H. P. Kramer)

Food Preparation and Service in Event of BW Attack

The attention of all medical officers is invited to the contents of Busanda Instruction 3300.8, "Passive Defense Against Biological Warfare; Preparation and Service of Food," dated 10 August 1954.

This Instruction prescribes methods of preparing and serving food in the event of biological warfare attack. The various ways in which such an attack might be manifested are outlined. Commanding officers and officers in charge of all ships and stations are directed to ensure that subordinate personnel engaged in food preparation and service familiarize themselves with the Instruction in order that they will be prepared to effect proper defense measures if required.

The contents of enclosure (1) to the Instruction will be of interest to medical officers in view of the fact that their advice and instruction will be solicited prior to decontamination or consumption of foods that are suspected of being contaminated by biological warfare agents.

* * * * * *

The printing of this publication has been approved by the Director of the Bureau of the Budget, June 23, 1952.

* * * * * *

☆U. S. GOVERNMENT PRINTING OFFICE:1954 O—311213